

REMARKS

This communication is responsive to the final Office Action dated June 16, 2011 (the “**Office Action**”). By this communication, the Applicants have amended claims 29-34 to clarify the invention, and have added new claims 35-38. Support for this amendment can be found throughout the specification as originally filed, for example, at paragraphs [0019] - [0021] and [0026] - [0034] and Figures 2-4. No new matter has been added.

Claims 29-31 stand rejected under 35 U.S.C. §103(a) as allegedly obvious over U.S. Patent No. 5,984,902 to Moorehead (“**Moorehead**”) in view of U.S. Patent No. 3,811,466 to Ohringer (“**Ohringer**”) and U.S. Application Publication No. 2002/0156430 to Haarala et al. (“**Haarala**”). Claims 32-34 stand rejected under 35 U.S.C. §103(a) as allegedly obvious over Moorehead, Ohringer and Haarala and further in view of U.S. Patent No. 5,944,698 to Fischer et al. (“**Fischer**”).

Claim Rejections Under 35 U.S.C. § 103(a)

The Examiner’s rejections of claims 29-34 are based on an assertion that the flow control membrane and the annular base member recited in claim 29 are equivalent to certain features shown in Figs. 3 and 7 of Moorehead, namely a “slit diaphragm 128” and a “retainer ring 124.”¹ Without conceding to the rejection, and solely to expedite prosecution, claim 29 has been amended to clarify that the flow control membrane is ”resilient,” and that the annular base member is part of the flow control membrane. By contrast, in Moorehead the “slit diaphragm 128” is separate from and “compressively interposed” between the “retainer ring 124” and another feature.² That is, the retainer ring 124 of Moorehead is the feature that applies compressive force to the slit diaphragm 128. In the present invention, however, the annular base

¹ See, e.g. Moorehead, col. 9, line 64 - col. 10, line 21

² Id.

member is subjected to compressive force along with the first membrane portion, which arrangement permits the pressure activated valves claimed herein to “satisf[y] in an optimal manner the two competing design goals of long structural life and high fluid flow rate” by providing, at the periphery of the flow control membrane, “the extra strength necessary * * * to withstand the compressive forces exerted thereon.”³ As would be understood by those skilled in the art, the resiliency of the flow control membrane allows it to deform to permit fluid flows in response to pressures in excess of a predetermined threshold as is required by the claim. Yet Moorehead teaches away from the resilient membrane claimed in the present application: the “retainer ring 124” of Moorehead must be capable of applying compressive force to the “diaphragm 128,” and those skilled in the art would understand that a resilient body is not as well suited as a rigid body to apply compressive force to another body, as deformation of the rigid body allows dissipation of forces that would be transmitted by a rigid body.

The structural distinction between the invention as claimed and what is disclosed in the Moorehead is even sharper as regards claim 30, which has been amended to recite that the membrane retention portion of the housing is “adapted to apply a retentive compressive force to the first membrane portion and the annular base member.” In Moorehead, as discussed above, the retentive force is applied by the “retainer ring 124;” if the annular base member as claimed was genuinely analogous to the retainer ring 124 of Moorehead, the claimed membrane retention portion would be superfluous.

The rejections of claims 29-34 are also based on the application of the curved slits disclosed in Figures 5B and 8B of Haarala to the valve of claim 29. The Applicants note, however, that the slits Haarala which the Examiner cites are located in catheter walls, rather than

³ See the specification of the instant application at ¶ [0023].

being made in flow control membranes disposed within valve housings as is claimed in the present application. It is respectfully submitted that the slits of Haarala are beyond the compass of what would be consulted by those skilled in the art in generating the slit valves claimed in the present application.

For the foregoing reasons, it is believed that the Examiner's rejections of claims 29-34 on §103(a) grounds have been overcome, and their withdrawal is respectfully requested.

CONCLUSION

From the foregoing, further and favorable action in the form of a Notice of Allowance is believed to be next in order and such action is respectfully requested.

In the event that there are any questions relating to this Amendment or to the application in general, it would be appreciated if the Examiner would contact the undersigned attorney by telephone at (617) 951-8753 so that prosecution of the application may be expedited.

The Director is hereby authorized to charge any additional fees which may be required, or credit any overpayment to Deposit Account No. 50-4047 (7061982001).

Respectfully submitted,

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